

Amendments to the Claims

1. (Currently Amended): A plasma enhanced chemical vapor deposition method of forming a ~~titanium silicide comprising layer~~ titanium silicide-comprising layer over a substrate using a reactive gas comprising $TiCl_4$ and at least one silane, comprising:

providing a substrate within a plasma enhanced chemical vapor deposition chamber;

first feeding $TiCl_4$ to the chamber without feeding any measurable silane to the chamber for a first period of time; and

after the first feeding for the first period of time, second feeding $TiCl_4$ and at least one silane to the chamber for a second period of time effective to plasma enhance chemical vapor deposit a ~~titanium silicide comprising layer~~ titanium silicide-comprising layer onto a conductively doped silicon surface on the substrate.

2. (Original): The method of claim 1 wherein the second feeding occurs at selected chamber deposition pressure and substrate temperature conditions, the first feeding also occurring at the selected second feeding chamber deposition pressure and substrate temperature conditions.

3. (Original): The method of claim 1 wherein the feeding of TiCl₄ during the first and second feedings is at a substantially constant volumetric flow rate.

4. (Original): The method of claim 1 wherein the feeding of TiCl₄ during the first and second feedings is at different volumetric flow rates.

5. (Currently Amended): ~~The method of claim 1~~ A plasma enhanced chemical vapor deposition method of forming a titanium silicide-comprising layer over a substrate using a reactive gas comprising TiCl₄ and at least one silane, comprising:

providing a substrate within a plasma enhanced chemical vapor deposition chamber;

first feeding TiCl₄ to the chamber without feeding any measurable silane to the chamber for a first period of time, and wherein nothing other than TiCl₄ is fed to the chamber during the first period of time; and

after the first feeding for the first period of time, second feeding TiCl₄ and at least one silane to the chamber for a second period of time effective to plasma enhance chemical vapor deposit a titanium silicide-comprising layer on the substrate.

6. (Original): The method of claim 1 wherein the first period of time is less than the second period of time.

7. (Original): The method of claim 1 wherein the first period of time is no greater than 5 seconds.

8. (Original): The method of claim 1 wherein the first period of time is no greater than 3 seconds.

9. (Original): The method of claim 1 wherein, the second feeding occurs at selected chamber deposition pressure and substrate temperature conditions, the first feeding also occurring at the selected second feeding chamber deposition pressure and substrate temperature conditions; and the first period of time is less than the second period of time.

10. (Original): The method of claim 1 wherein the first feeding comprises plasma generation within the chamber.

11. (Original): The method of claim 1 wherein the first feeding does not comprise plasma generation within the chamber.

Claims 12-40 (Canceled).

41. (New): The method of claim 12 wherein the TiCl₄ and silane are fed to the chamber from separate injection ports during the second feeding.

42. (New): The method of claim 12 wherein the TiCl₄ and silane are mixed prior to feeding to proximate the substrate within the chamber during the second feeding.

43. (New): A plasma enhanced chemical vapor deposition method of forming a titanium silicide-comprising layer over a substrate using a reactive gas comprising TiCl₄ and at least one silane, comprising:

providing a substrate within a plasma enhanced chemical vapor deposition chamber;

first feeding TiCl₄ to the chamber without feeding any measurable silane to the chamber for a first period of time; and

after the first feeding for the first period of time, second feeding TiCl₄ and at least one silane to the chamber for a second period of time effective to plasma enhance chemical vapor deposit a titanium silicide-comprising layer on the substrate, no material being deposited on the substrate from a time period starting with the first feeding until starting with the second time period.

44. (New): The method of claim 43 wherein the second feeding occurs at selected chamber deposition pressure and substrate temperature conditions, the first feeding also occurring at the selected second feeding chamber deposition pressure and substrate temperature conditions.

45. (New): The method of claim 43 wherein the feeding of TiCl₄ during the first and second feedings is at a substantially constant volumetric flow rate.

46. (New): The method of claim 43 wherein the feeding of TiCl₄ during the first and second feedings is at different volumetric flow rates.

47. (New): The method of claim 43 wherein nothing other than TiCl₄ is fed to the chamber during the first period of time.

48. (New): The method of claim 43 wherein the first period of time is less than the second period of time.

49. (New): The method of claim 43 wherein the first period of time is no greater than 5 seconds.

50. (New): The method of claim 43 wherein the first period of time is no greater than 3 seconds.

51. (New): The method of claim 43 wherein,
the second feeding occurs at selected chamber deposition pressure
and substrate temperature conditions, the first feeding also occurring at the
selected second feeding chamber deposition pressure and substrate
temperature conditions; and

the first period of time is less than the second period of time.

52. (New): The method of claim 43 wherein the first feeding
comprises plasma generation within the chamber.

53. (New): The method of claim 43 wherein the first feeding
does not comprise plasma generation within the chamber.